1. Nov/2021/Paper_11/No.8

(a) Write 6300 m in kilometres.

..... km [1]

(b) Convert $1\,cm^2$ to mm^2.

..... mm^2 [1]

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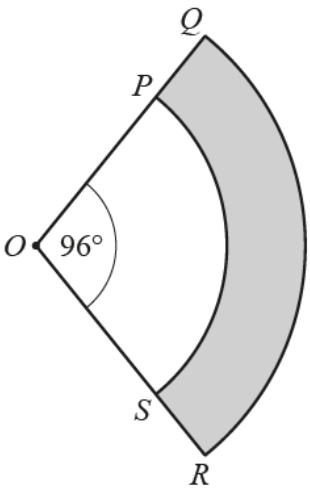
2. Nov/2021/Paper_21/No.3b

(b)



NOT TO SCALE

OPS and *OQR* are sectors of circles each with centre *O*.
OPQ and *OSR* are straight lines.
$OP = 7.4\,\text{cm}$, $PQ = 1.2\,\text{cm}$ and $Q\hat{O}R = 96°$.

Calculate the shaded area.

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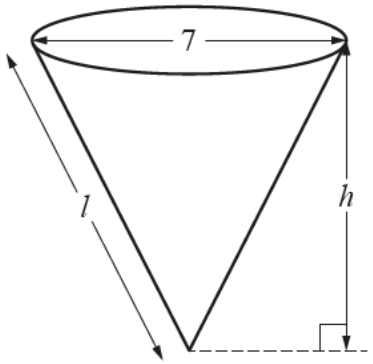
..... cm^2 [3]

3. Nov/2021/Paper_22/No.8

[Volume of cone $= \frac{1}{3}\pi r^2 h$]

[Curved surface area of a cone $= \pi r l$]



The diagram shows a paper cup in the shape of a cone.
The diameter of the top of the cup is 7 cm.
The volume of the cup is 110 cm^3.

(a) Show that the height of the cup, h cm, is 8.57 correct to 2 decimal places.

[3]

(b) Calculate the slant height, l cm, of the cup.

$l =$ ..... [2]

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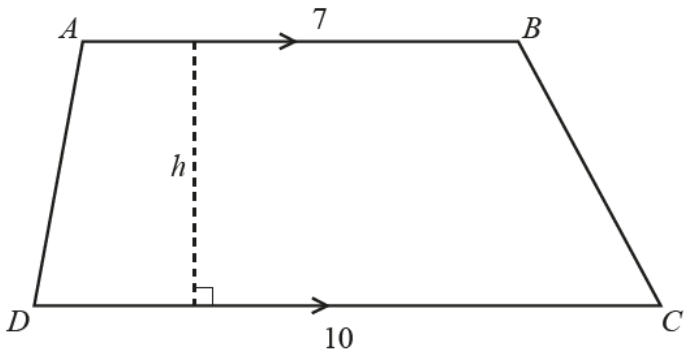
4. June/2021/Paper_11/No.7



NOT TO SCALE

The diagram shows trapezium $ABCD$.
$AB = 7$ cm and $DC = 10$ cm.
The area of $ABCD$ is 85 cm^2.
The perpendicular height of the trapezium is h cm.

Find the value of h.

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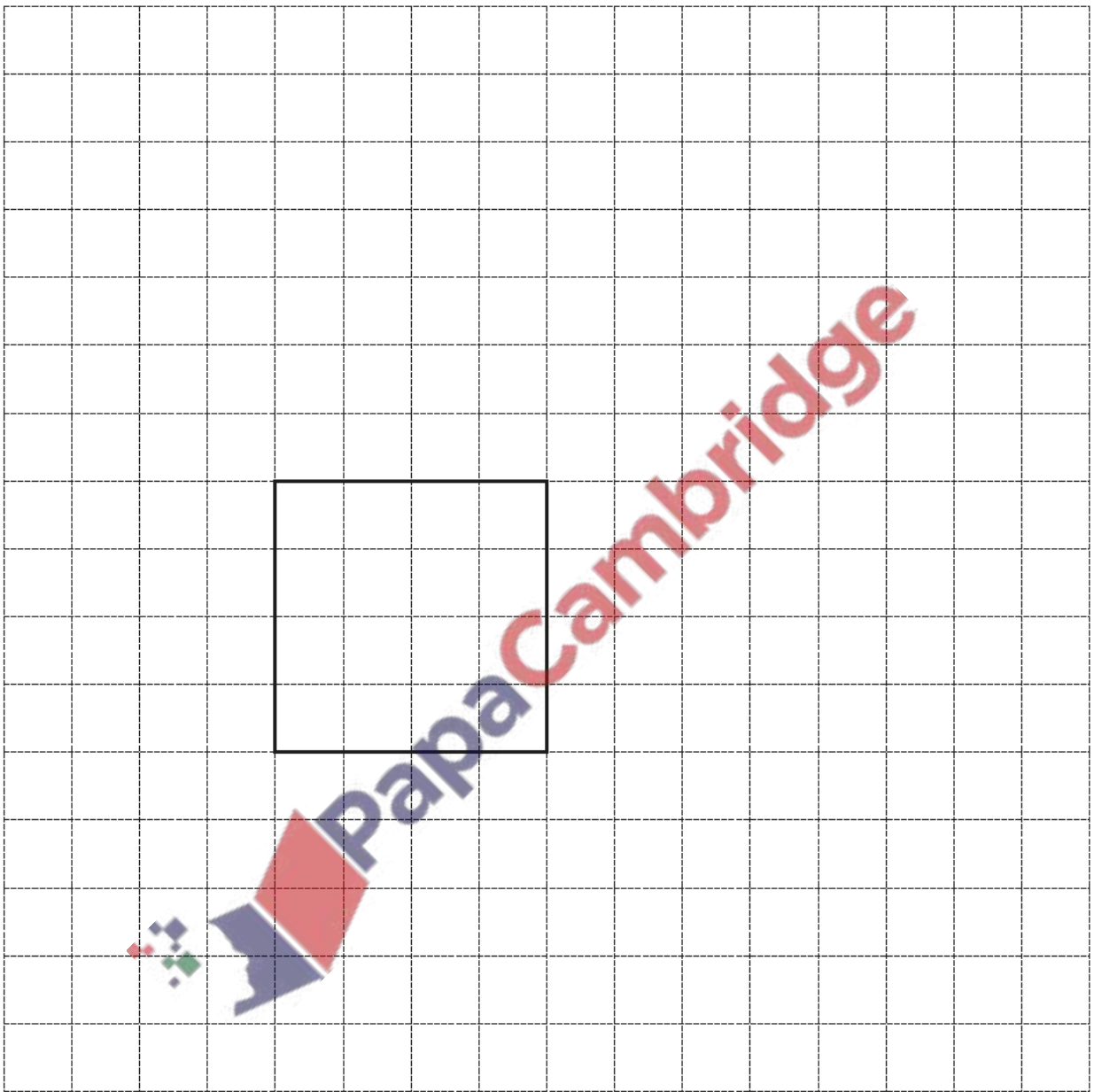
$h =$ ..... [2]

5. June/2021/Paper_12/No.6

The base of a cuboid is a square with side length 4 cm.
The volume of the cuboid is 48 cm^3.

On the grid, complete the accurate drawing of the net of the cuboid.
The base is drawn for you.



[3]

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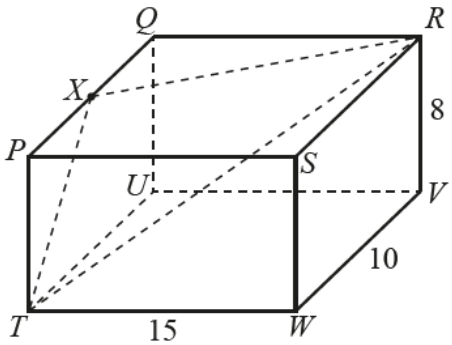
(b)



The diagram shows a cuboid.
$TW = 15$ cm, $WV = 10$ cm and $RV = 8$ cm.

(i) Show that $TR = 19.7$ cm, correct to 1 decimal place.

[3]

(ii) X is the midpoint of PQ.

Calculate $T\hat{R}X$.

$T\hat{R}X =$ ..... [5]

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7. June/2021/Paper_22/No.7

(a) A rectangular field measures 30 m by 45 m.

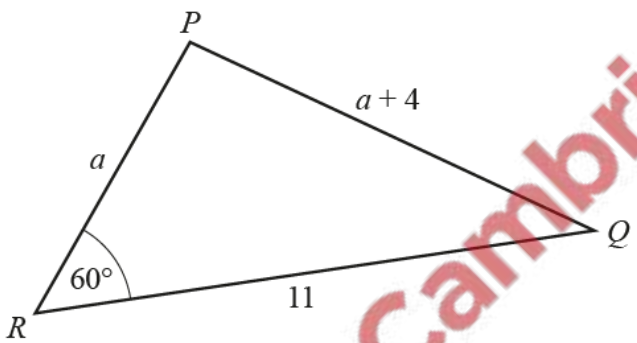
(i) Calculate the perimeter.

..... m [1]

(ii) Calculate the length of a diagonal.

..... m [2]

(b)



NOT TO SCALE

The diagram shows a sketch of triangle PQR.
All lengths are given in centimetres.

Calculate the length a.

$a =$ ..... cm [4]

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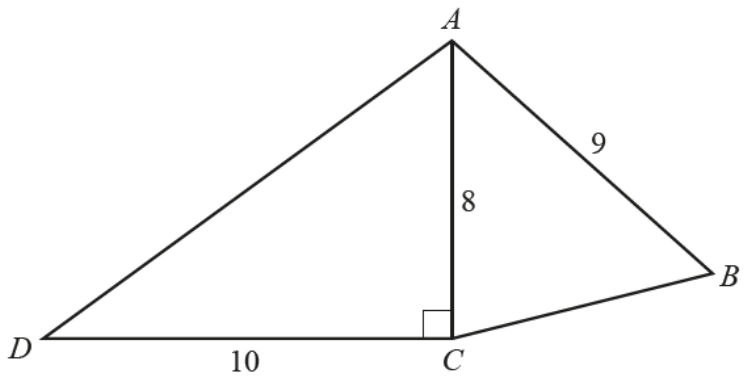
(c) The diagram shows a sketch of quadrilateral $ABCD$.
All lengths are given in centimetres.



NOT TO SCALE

The area of quadrilateral $ABCD$ is $70\,\text{cm}^2$.

Calculate $D\hat{A}B$.

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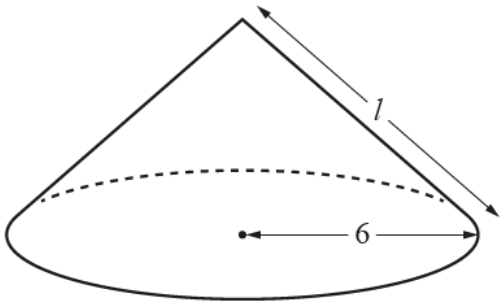
$D\hat{A}B =$ ..... [6]

8. June/2021/Paper_22/No.9

[Volume of a cone $= \frac{1}{3}\pi r^2 h$**]**

[Curved surface area of a cone $= \pi rl$**]**



A cone has radius 6 cm and slant height l cm.
The **total** surface area of the cone is 84π cm^2.

(a) Show that $l = 8$.

[2]

(b) Calculate the volume of the cone.

..... cm^3 [3]

(c) A similar cone has a **total** surface area of 47.25π cm^2.

Find the radius of this cone.

..... cm [2]

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